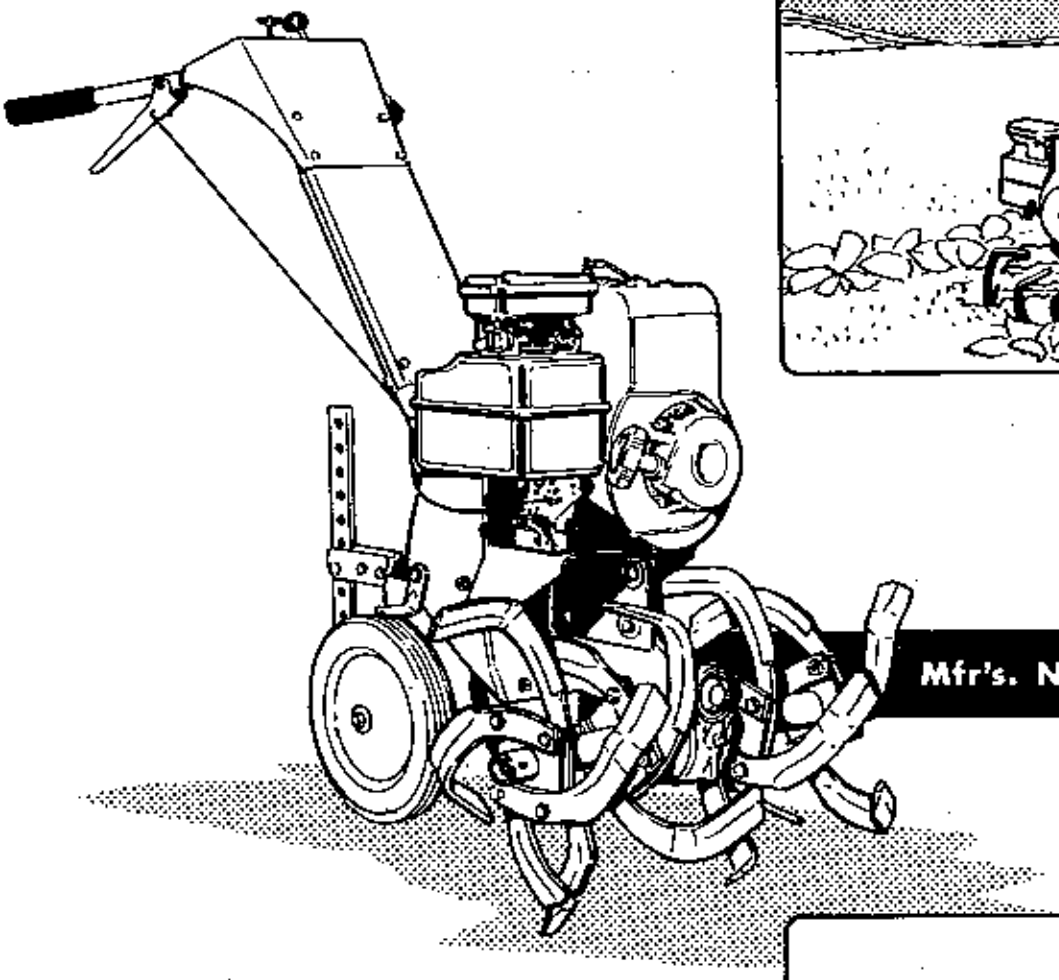
Simplicity®



Mfr's. No. 511 & 512

SUPERMATIC ROTICUL

4 H.P. & 5 H.P.

LITHO IN U.S.A.

1306

SIMPLICITY MANUFACTURING COMPANY, INC.

PACKING

The Roticul is delivered complete in one carton.
The carton contains:

1 - Cover
1 - Reverse Rod
1 - Handle Assembly
1 - Spring Extension
1 - Engine, Frame and Transmission Housing Assembly
2 - Wheel and tire Assemblies w/bolts and nuts
1 - Depth Bar
4 - Tine Assemblies
1 - Bag of Hardware
1 - Clamp

Should shortages of any of the above items occur, advise by stating Packer's number listed on green packing slip, part number and description of items missing.

ASSEMBLY

1. Remove (2) 3/8-16 x 1-1/4"lg. capscrews, lockwashers and nuts holding the top of the support assemblies and two (2) 3/8-16 x 3/4" carriage bolts, lockwashers and nuts located in the frame assembly. Insert the handle assembly into the frame assembly and secure the lower end with the carriage bolts, lockwashers and nuts removed. Do not tighten. Note that the bolt heads are on the inside. Secure the handle assembly to upper frame with the capscrews, lockwashers and nuts removed. Tighten both the capscrews and carriage bolts.

2. Attach the throttle control assembly to the control housing assembly with (2) 1/4-20 x 1-1/2" self-tapping screws taped to the assembly. Loosen the capscrew holding the cable clip on the lower handle assembly and secure cable with same. Hook the larger loop of the clutch wire in the clutch grip holes and hook the other end onto the coil spring connected to the idler lever assembly.

3. Tilt the Roticul back and attach the right and left inner tine assemblies to the shaft and secure with the pins and clips supplied in the bag of hardware. The inner tine assemblies are shorter and will slide on easily if installed on the correct side. Insert clips completely through the pins to prevent loss. Then attach the outer tine assemblies in a similar manner. Check to see that the sharp edge of the upper tines face forward.

4. Tilt the Roticul forward and rest it on its engine. Remove the outside jam nut from the bolt assembled through the wheel and tire assembly and attach to the upright. Jam the nuts against the upright securely and insure that the wheel turns freely with little wobble. Install the other wheel and tire assembly in the same manner. Install the depth bar and clamp with round end of the depth bar toward handle and secure with the pin and clip supplied in the bag of hardware. With the Roticul on its wheels, remove the shipping plug from the vent hole on the rear of the worm gear housing under the engine and from the reversing gear box under the handle assembly.

5. Remove knob from reverse rod, insert threaded end through the bushing in the control housing assembly and reinstall knob. Place the lower end through the lower hole in the transmission reversing lever and secure with cotter pin supplied in bag of hardware.

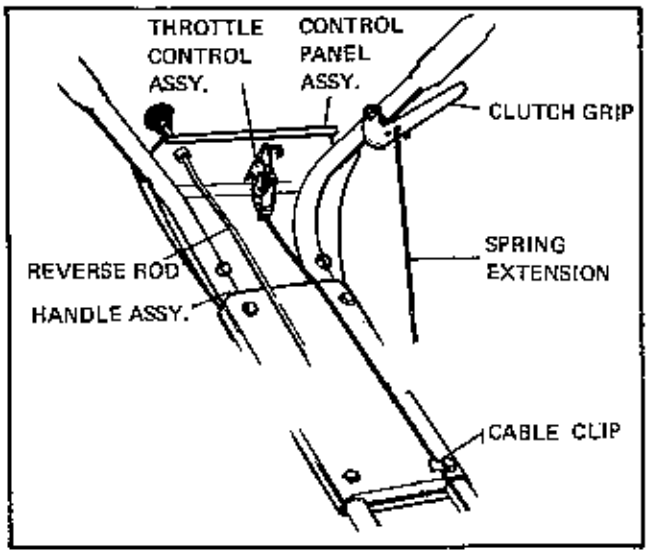


Figure 1.

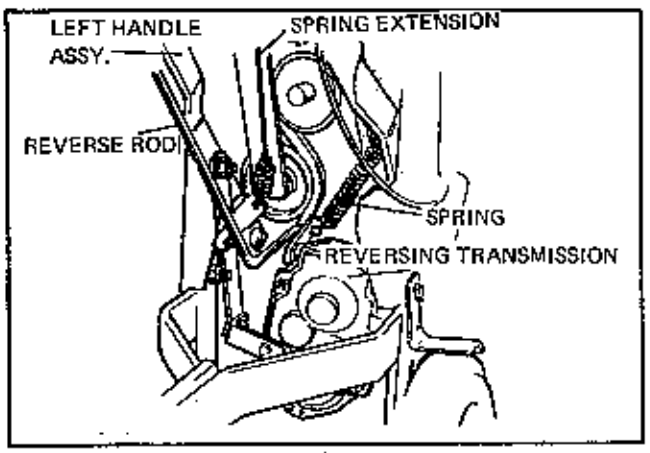


Figure 2.

6. Install cover over frame assembly behind engine and secure with (2) thumb screws provided.

LUBRICATION — ENGINE

Prepare and maintain engine in accordance with the instructions furnished by the engine manufacturer. Be sure to fill engine crankcase with proper oil and check air cleaner as recommended.

WORM GEAR HOUSING

THE WORM GEAR DRIVE AND REVERSING GEAR BOX ON THE ROTICUL IS LUBRICATED WITH SPECIAL WORM GEAR OIL AVAILABLE AT THE FACTORY. **DO NOT USE ORDINARY TRANSMISSION OILS.** If ordinary gear oil is used, gear may fail. It is filled at the factory but should be checked before use and again after every hour to five hours of operation. To add oil to the worm gear housing, the tiller should be tipped far enough backward on the handles so the housing is as near vertical as possible. Turn the tine shaft slowly while adding oil so that the oil will reach the back bearing. FILL WITH OIL UNTIL THE OIL SHOWS AT THE PLUG WHEN TILLER IS RESTING ON TINES. DO NOT OVER FILL. Screw plug back on tight. To add oil to the reversing gear box, tip forward and fill and check in the same manner.

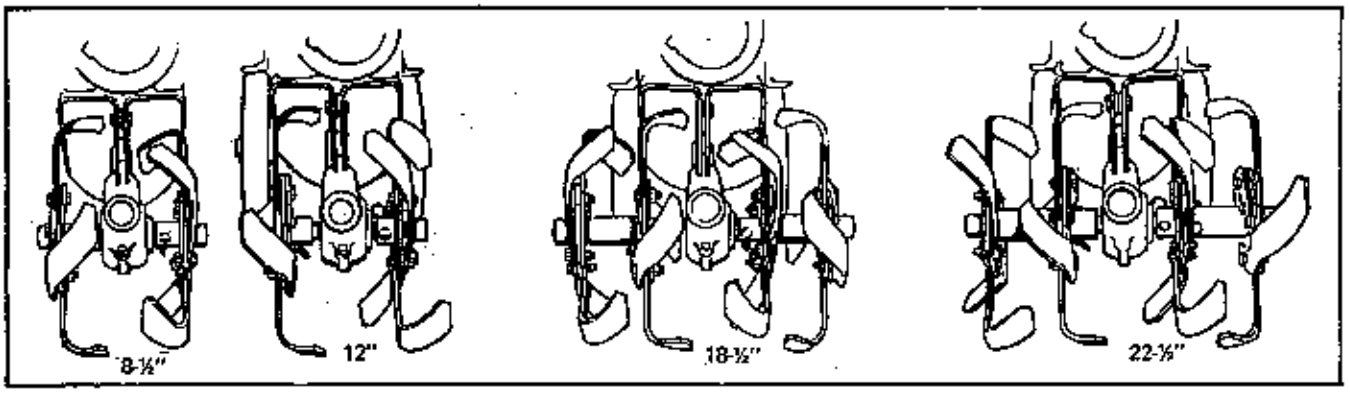


Figure 3.

NOTE

During Operation, The Action Of The Worm Gear Drive May Cause The Housing To Become Quite Warm. This Is Normal And No Harm Will Be Done To The Gears As Long As The Housing Is Filled With Special Worm Gear Oil.

MISCELLANEOUS

Lubricate the idler lever and clutch grip pivot points with SAE-10 oil frequently. Caution – do not oil wheel bearings. These are sealed teflon bearings and oil will collect dirt which will accelerate wear.

TIRES

The Roticul is supplied with two solid rubber tires permanently mounted on wheels which contain sealed teflon bearings and do not require future attention.

ADJUSTMENT

HANDLE ASSEMBLY

Loosen the carriage bolts at the lower end of the handles and pivot the handle assembly to desired height. This height is best judged under operating conditions.

CLUTCH

1. Check for proper clutching action. Set belt stops as near as possible to belt when engaged. Make sure that the belt stops turning when the clutch lever is released and does not slip when gripped. If adjustment is needed, disconnect the lower spring hook from the idler lever arm and screw the hook in or out as required to shorten or lengthen the effective clutch wire length.

2. After some use the drive belt may stretch so that proper clutch action cannot be achieved. This can be overcome by moving one or two washers from above the engine casing to a position between the engine and frame on the engine mounting bolts.

WHEEL SCRAPERS

The wheel scrapers should be adjusted to allow the wheels to be cleared of the ground which will build up on them. This is accomplished by loosening the capscrews holding the scrapers and positioning as desired. This position may vary depending on the condition and type of ground being worked.

TINES

The cover of this manual illustrates the tine arrangement as the tiller is shipped. The tiller will till 22-1/2" wide as standard. The two outer sets of tines may be removed for narrow cultivation by pulling the two spring clips and pins and sliding outer tine assembly off of the inner tine assembly. This permits narrow cultivation - 12" wide.

The tines may be further adjusted to cut additional width. By placing tines in position as shown in Figures 3, cutting widths may be adjusted to 8-1/2", 12", 18-1/2" or 22-1/2".

OPERATION

Before putting the Roticul into operation, make sure that the engine has been serviced completely as described in the engine instruction book provided. The Roticul, if operated properly, will allow the operator to experience finger-tip ease in preparing the ground for seeding.

1. Start the Roticul engine by setting the throttle control to 1/2 to 3/4 open – open the choke and pull the starting rope. When the engine starts, close the choke and adjust the throttle to the desired speed. For tilling work, full throttle is recommended.

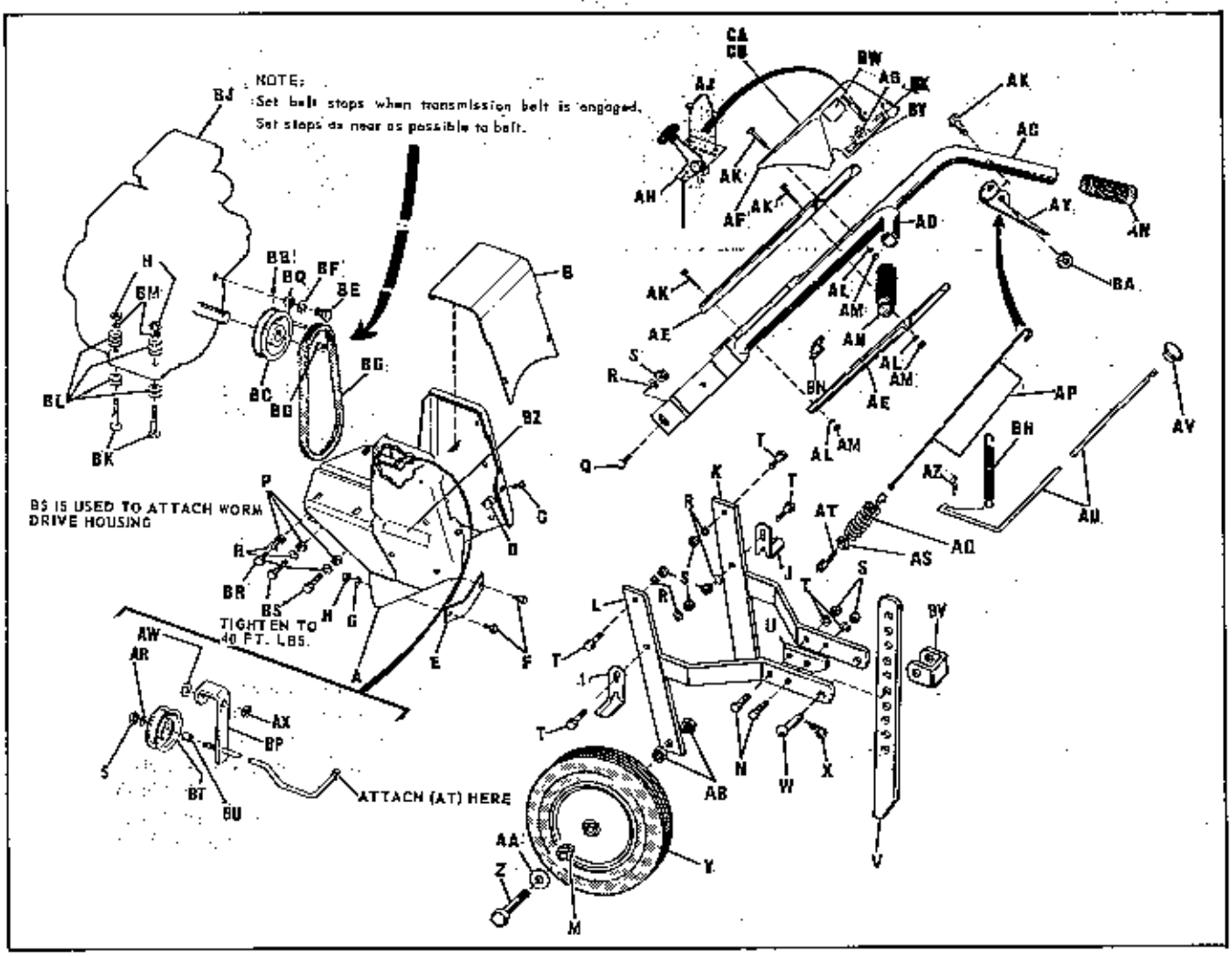
2. To operate the tiller in the forward direction, grip the right hand clutch lever. TO REVERSE THE MACHINE, RELEASE THE CLUTCH LEVER, PUSH IN AND HOLD THE REVERSE KNOB, AND RE-ENGAGE THE CLUTCH LEVER. To return to neutral, just release the clutch lever.

3. The depth bar setting will determine the depth of the tilling action. For tilling at a depth of 4 to 6 inches, install the pin through the second or third hole from the top. For a more shallow tilling action, the depth bar can be raised. Remember – the deeper the depth bar is set into the ground, the deeper the tine blades will dig into the ground.

4. To maintain easy control of the tiller, the operator should use the depth bar to furnish the necessary drag on the Roticul, rather than pulling back on the handles. While operating the Roticul in preparing the ground, the operator needs only to press down on the handles for a deeper tilling action. Remember – a downward pressure on the handles results in a slow down of the forward movement and a deeper tilling action. An upward pressure on the handles results in an increase in the forward movement and a shallow tilling action.

INSTRUCTIONS CONTINUED ON PAGE 8

FRAME, HANDLES & CONTROLS


NOTE:
Set belt stops when transmission belt is engaged.
Set stops as near as possible to belt.
BS IS USED TO ATTACH WORM DRIVE HOUSING
TIGHTEN TO 40 FT. LBS.
ATTACH (AT) HERE

WARRANTY

The company warrants Simplicity Products to be free from defects in material and workmanship except the company makes no warranty express or implied with respect to tires, engines and engine accessories which generally are warranted by their respective manufacturers. Any part covered by this warranty which is proven defective within one year, under normal use, from date of purchase, will be replaced free of charge, f. o. b. Port Washington, Wisconsin, provided such part is returned to factory transportation charges prepaid and is found to be defective upon examination at the factory. The company is not obligated under this warranty to bear cost of labor or delivery charges in replacement of defective parts. This warranty does not apply to any Simplicity Products altered outside of Simplicity's factory. Such replacement of defective parts shall be the exclusive remedy and in no event shall Simplicity be liable for consequential damages. EXCEPT AS SPECIFICALLY PROVIDED HEREIN, THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON ANY SIMPLICITY PRODUCT.

TINE WARRANTY

Simplicity Manufacturing Company warrants rotary tiller tines against breakage for the period not to exceed the normal life of the rotary tiller; and will replace broken tines directly to the customer at no charge; provided broken tines are returned prepaid to the Company's service department, Port Washington, Wisconsin.

FRAME, HANDLES & CONTROLS

PARTS LIST

	Part No.	Description
A	118343	Body Assy.
B	118241	Body Cover
C	715040	Thumb Screw
D	718026	Speed Nut
E	118208	Shaft Support
F	705012	Hex Capscrew, 5/16"-18 x 5/8" lg.
G	721501	Lock Washer, 5/16"
H	717001	Hex Nut, Full, 5/16-18
J	118220	Scraper
K	118229	Right-Hand Support Assy.
L	118232	Left Hand Support Assy.
M	118132	Bushing Wheel
N	705009	Hex Capscrew, 3/8-16 x 1-1/2" lg.
P	717002	Hex Nut, Full, 3/8-16
Q	703004	Carriage Bolt, 3/8-16 x 3/4" lg.
R	720002	Lock Washer, 3/8"
S	717003	Hex Nut, Full, 3/8-16
T	705016	Hex Capscrew, 3/8-16 x 1-1/4" lg.
U	118207	Stop Plate
V	118081	Depth Bar
W	105249	Pin
X	8161045	Spring Clip
Y	118030	Wheel & Tire Assy.
Z	705037	Hex Capscrew, 1/2-13 x 3-1/4" lg.
AA	719004	Plain Washer, 1/2"
AB	717017	Hex Jam Nut, 1/2-13
AC	118344	Right Hand Handle
AD	118345	Left Hand Handle
AE	118236	Handle Cover
AF	118237	Control Housing Assy.
AG	118273	Bushing
AH	118235	Throttle Control Assy.
AJ	714016	Self-Tapping, Recessed Hex, 1/4-20 x 1/2" lg.
AK	705025	Hex Capscrew, 1/4-20 x 1-1/2" lg.
AL	720003	Lock Washer, 1/4"
AM	717005	Hex Nut, Full, 1/4-20
AN	106558	Grip

Ref. Let.	Part No.	Description
AP	118328	Spring Extension
AQ	118290	Spring
AR	720002	Lock Washer, 3/8"
AS	717023	Hex Nut Full #10-24
AT	118311	Eye Bolt
AU	118342	Reverse Rod
AV	118258	Knob
AW	153072	Washer
AX	158399	Retaining Ring
AY	118056	Grip Clutch
AZ	722002	Cotter Pin
BA	717513	Hex Nut, Full, 1/4-20
BB	713504	Set Screw, 5/16-18 x 3/8" lg.
BC	118331	Pulley
BD	8221042	Key
BE	706010	Hex Capscrew, 1/2-20 x 3/4" lg.
BF	721506	Lock Washer, Int. 1/2"
BG	118225	V-Belt
BH	159106	Spring
BJ		Engine, 4 H. P. or 5 H. P.
BK	705020	Hex Capscrew, 5/16-18 x 2" lg.
BL	719002	Plain Washer, 5/16"
BM	720001	Lock Washer, 5/16"
BN	106786	Cable Clip
BP	118341	Idler Lever Assy.
BQ	118259	Bolt Stop
BR	705004	Hex Capscrew, 3/8-16 x 3/4" lg.
BS	715015	Hex Capscrew, 3/8-16 x 1-1/4" lg.
BT	154534	Pulley
BU	118335	Spacer
BV	118371	Clamp
BW	118279	Instructions
BX	118280	Film Tiller Clutch
BY	118281	Film Tiller Gear Shift
BZ	118282	Film Roticul
CA	118352	Emblem S—5 H.P.
CB	106514	Emblem S—4 H.P.

Should warranty service be necessary, the information below should be presented to the authorized SIMPLICITY Dealer.

Customer's Name _____

Address _____

Mfg. No. _____ Serial No. _____

Date Purchased _____

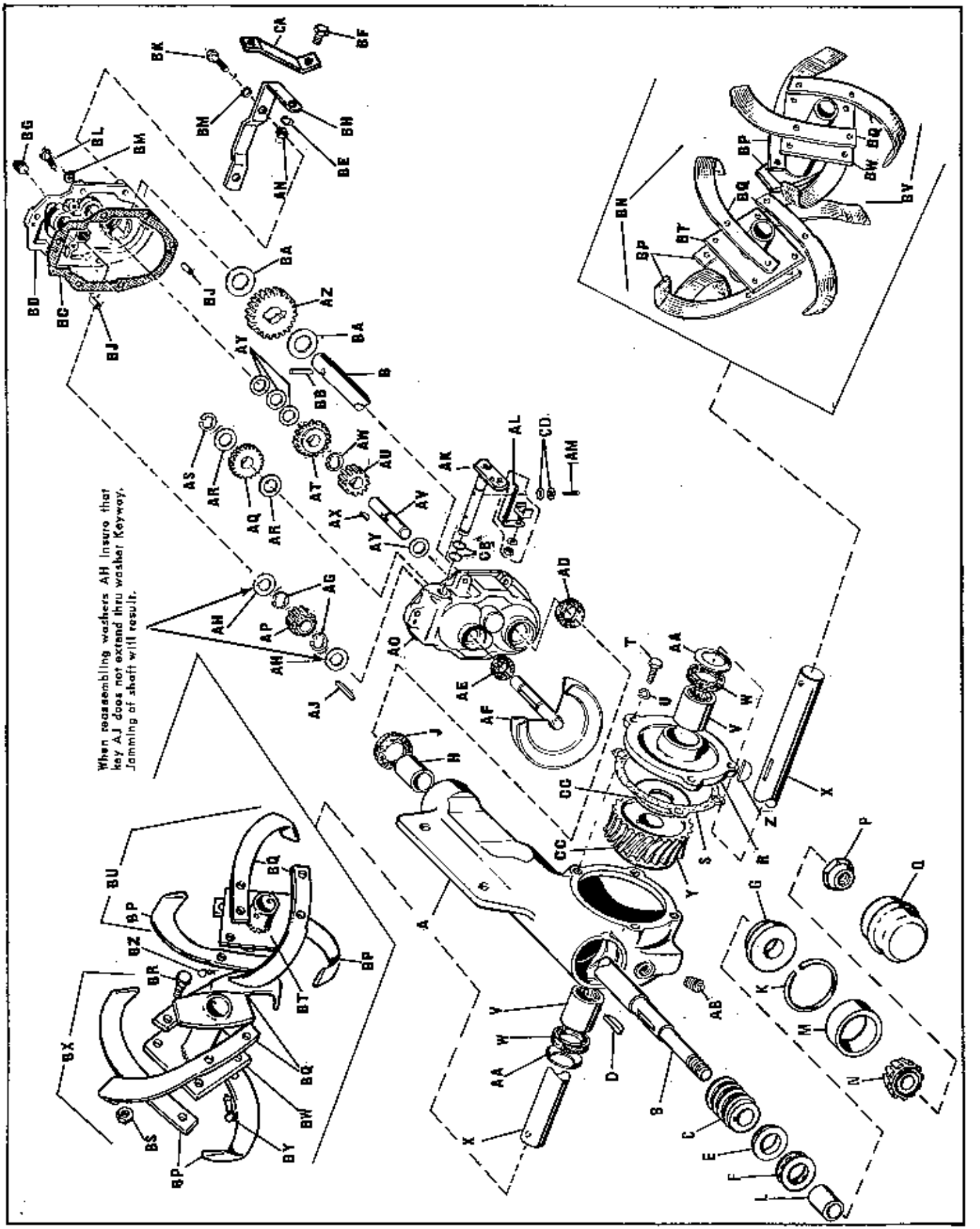
Purchased From _____

Address _____

Engine Model No. _____ Serial No. _____ Type No. _____

To obtain replacement parts from dealer, advise quantity, part number and description.

TRANSMISSION & TINES



TRANSMISSION & TINES
PARTS LIST

Ref. Let.	Part No.	Description
A	118387	Worm Drive Housing
B	118376	Worm Shaft
C	118330	Worm
D	725502	Key
E	118379	Thrust Washer
F	118377	Thrust Bearing
G	118378	Thrust Spacer
H	118389	Bushing
J	118117	Oil Seal
K	118094	Snap Ring
L	118382	Spacer
M	118374	Bearing Cup
N	118373	Bearing Roller
P	118381	Special Nut
Q	118380	Cup
R	118316	Cover
S	118024	Gasket
T	715018	Hex Capscrew, 1/4-20 x 5/8" lg.
U	720003	Lock Washer, 1/4"
V	118020	Needle Bearing
W	118118	Oil Seal
X	118021	Worm Shaft
Y	118337	Worm Gear
Z	725005	Key
AA	118082	Washer
AB	726003	Pipe Plug, 3/8
AC	118221	Gear Case
AD	118117	Oil Seal
AE	156084	Oil Seal
AF	118248	Pulley & Shaft Assembly
AG	118240	Retainer Ring
AH	118271	Special Washer
AJ	118278	Key
AK	118360	Shift Lever Assembly
AL	103074	Shift Kit
AM	715059	Socket Hd. Screw, 10-24 x 5/8" lg.
AN	717001	Hex Nut, Full, 5/16-18
AP	118204	Pinion Shift
AQ	118262	Reverse Pinion

Ref. Let.	Part No.	Description
AR	118264	Special Washer
AS	118240	Retainer Ring
AT	118265	Pinion
AU	118201	Pinion
AV	118263	Cluster Shaft
AW	118240	Retainer Ring
AX	725003	Key
AY	118269	Special Washer
AZ	118202	Drive Gear
BA	118252	Special Washer
BB	118203	Worm Shaft Pin
BC	118253	Gasket
BD	118261	Gear Case Cover
BE	720001	Washer Lock, 5/16"
BF	705017	Hex Capscrew, 5/16-18 x 3/4" lg.
BG	726002	Pipe Plug, 1/4"
BH	118329	Arm Gear Case
BJ	723005	Roll Pin
BK	714018	Self-Tapping Screw, Hex Hd. 1/4-20 x 1-1/4" lg.
BL	714012	Self-Tapping Screw Hex Hd. 1/4-20 x 7/8" lg.
BM	720003	Lock Washer, 1/4"
BN	118083	Left Hand Inner Tine Assy.
BP	8152001	Left Hand Tine Blade
BQ	8152002	Right Hand Tine Blade
BR	706009	Hex Capscrew, 7/16-20 x 1-1/4" lg.
BS	717512	Hex Nut, Full, 7/16-20
BT	118084	Inner Tine Plate Assy.
BU	118120	Right Hand Inner Tine Blade Assy.
BV	105222	Extension, Left Hand Tine Blade Assy.
BW	105221	Plate Assy., Tine Extension
BX	105223	Extension, Right Hand Tine Blade Assy.
BY	118053	Pin
BZ	8161045	Spring Clip
CA	118359	Bracket
CB	118332	"O" Ring
CC	118315	Thrust Washer
CD	118384	Washer 3/16"

Remember...

FOR YOUR SAFETY

1. ALWAYS STOP ENGINE BEFORE LEAVING MACHINE
2. ALWAYS STOP ENGINE BEFORE SERVICING OR ADJUSTING MACHINE OR EQUIPMENT
3. ALWAYS KEEP HANDS FEET AND CLOTHING AWAY FROM POWER-DRIVEN PARTS

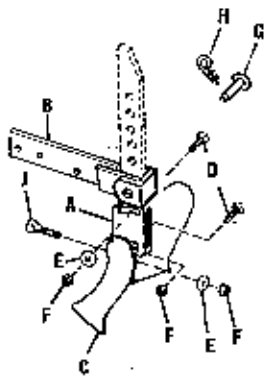
LET THE DEPTH BAR DO THE WORK

Your Simplicity Rotary Tiller is scientifically designed to prepare the soil for planting with a minimum of effort. Do not attempt to till when the soil is very wet as this may cause lumps which are difficult to work up. If the soil is extremely hard and dry you may find it desirable to cross-till to obtain the depth you want. On the first pass, till across the plot, and on the second pass, till in the direction in which the rows will run.

When operating your Simplicity rotary tiller for the first time, we suggest you try it for a short time to get the "feel". You will want to find the most comfortable handle position, the correct location of the depth bar for ease of operation, the engine speed best suited to your soil condition. You will soon find the correct pressure to apply to the handles. Experiment with the clutch lever, and notice the immediate response from "tickling" the clutch. You will find this very desirable when doing close cultivation with the tiller.

FURROW OPENER — MFR.'S NO. 340

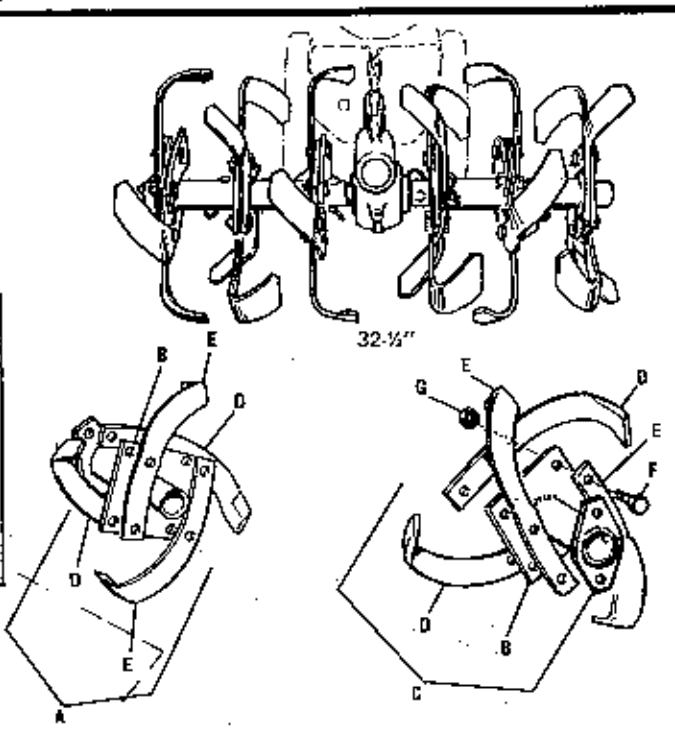
A furrow opener shovel is available which mounts on the depth bar. You will find this shovel very handy for digging furrows for crops such as potatoes that are planted in rows. When installing the furrow opener, turn the depth bar upside down and bolt to the tool holder with the carriage bolts, washers and nuts supplied. Remove the stop plate from between the support assemblies on the Rotiel and install the extension support assembly with the same hardware. The depth bar is then positioned in this extension, the clamp installed and these pieces secured with the pin and clip supplied.



Ref. Let.	Part No.	Description
A	8271503	Tool Holder
B	118287	Extension Support Assembly
C	103010	8" Furrow Opener
D	703002	Carriage Bolt, 3/8-16 x 1-1/4" lg.
E	719001	Plain Washer, 3/8"
F	717003	Hex Nut, Full, 3/8-16
G	118053	Pin
H	8161015	Spring Clip
J	704001	Plow Bolt

TINE EXTENSION SET MFR.'S NO. 212

The tine extension set consists of a left hand and right hand tine assembly. These additional extensions will allow an increase from the standard 22-1/2" tilling width to a width of 32-1/2" as shown in Figure 2. To install the extension tines, place long hubs of extension tines over hubs of tines previously installed, and secure with pin and spring clip. Be sure the extension tines are so mounted that the sharp edges of the tines on top face forward.



Ref. Let.	Part No.	Description
A	105222	Extension, L.H. Tine Assy. Complete
B	105221	Plate Assy., Tine Extension
C	105223	Extension, R.H. Tine Assy. Complete
D	8152001	L.H. Tine Blade
E	8152002	R.H. Tine Blade
F	706009	Hex Capscrew, 7/16-20 x 1-1/4" lg.
G	717512	Hex Nut, Full, 7/16-20